

Office Action Summary

Application No.

10/054,741

Applicant(s)

IKEDA ET AL.

Examiner

Huy D Nguyen.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9, 10.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7-10, 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Spear (U.S. Patent No. 6,289,220).

Regarding claims 1, 7, and 13, Spear teaches a mobile communication system characterized by comprising: a plurality of base stations; and a network control station conceptually located above said plurality of base stations, the network control station duplicating and/or synthesizing information in order to allow a mobile station to simultaneously communicate with at least two base stations (e.g., in soft handoff, mobile station communicates simultaneously with multiple base stations) (Fig. 2; Col. 1, lines 42-67).

Regarding claims 2, 8, Spear teaches the mobile communication system according to claim 1, characterized in that: said mobile station comprises means for determining, upon receiving signals from the plurality of base stations, to which base stations the mobile station is to be connected in order to satisfy a downlink receiving quality desired by the mobile station and notifying the network control station of the desired base stations to which the mobile station is to be connected (Col. 1, lines 42-58), said network control station has means for transmitting a duplicated information signal to said base stations; and said mobile station thus controls the

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downlink receiving quality by receiving and synthesizing signals transmitted by the plurality of base stations (Col. 1, lines 59-67).

Regarding claims 3, 9, 14, Spear teaches a mobile communication system comprising: a plurality of base stations; a network control station conceptually located above said plurality of base stations, the network control station duplicating and/or synthesizing information in order to allow a mobile station to simultaneously communicate with at least two base stations; and quality control means having a function of managing receiving quality of a mobile station present within a service area and/or a function of measuring traffic in each cell within the service area, the quality control means notifying said network control station of base stations with which the mobile station is to communicate simultaneously (Fig. 2; Col. 1, lines 42-67).

Regarding claims 4, 10, Spear teaches the mobile communication system according to claim 3, characterized in that: said mobile station has means for registering, in said quality control means, the downlink receiving quality desired by the mobile station and the location of the mobile station, and said quality control means determines to which base stations the mobile station is to be connected in order to satisfy the receiving quality and notifies said network control station of these base stations, said network control station transmits duplicated information signal to the base stations, and said mobile station further receives and synthesizes signals transmitted by the plurality of base stations to control the downlink receiving quality (Col. 1, lines 42-67).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spear (U.S. Patent No. 6,289,220) in view of Butovitsch et al. (U.S. Patent No. 6,259,927).

Regarding claims 5, 11, Spear does not teach the mobile communication system according to claim 3, characterized in that: said mobile station has means for notifying, before transmitting information, said quality control means of a desired uplink receiving quality received by base stations and/or a transmittable maximum power of the mobile station and/or the location of the mobile station, said quality control means has means for identifying base stations to which said mobile station is to be connected in order to satisfy quality in such a manner that the transmittable maximum power of said mobile station is not exceeded and means for requesting the base stations and said network control station to receive and synthesize a signal from said mobile station and designating transmission power that is to be used by said mobile station, and said mobile station transmits information using said designated transmission power, and the network control section synthesizes signals received by the base stations to control the uplink receiving quality. However, the preceding limitations for uplink power control are taught in Butovitsch et al. (Col. 1, lines 44-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Butovitsch et al. to the teaching of Spear in order to obtain high system capacity.

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5. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spear (U.S. Patent No. 6,289,220) in view of Kang et al. (U.S. Patent No. 5,781,861).

Regarding claims 6, 12, Spear does not teach the mobile communication system according to claim 3, characterized in that: said quality control means has means for measuring traffic in cells surrounding a cell in which said mobile station is present and means for requesting the network control station to transmit a duplicate signal to one or more stations, if any, which have a lower measured traffic and which can transmit information to said mobile station communicating in an adjacent cell, and said mobile station receives and synthesizes signals from base stations that have been communicating with the mobile station and from the one or more base stations, thereby improving the downlink receiving quality. However, the preceding limitations are taught in Kang et al. (Col. 2, lines 26-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Kang et al. to the teaching of Spear in order to reduce heavy traffic load in a cell.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Roxbergh (U.S. Patent No. 6,553,016).

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy D Nguyen whose telephone number is 703-305-3283. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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07/28/04


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